

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|   |   |   |
|---|---|---|
| Applicant's or agent's file reference<br><b>FP19375-BJN</b> | <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <b>FOR FURTHER<br/>ACTION</b> </div> <div>             see Form PCT/ISA/220<br/>             as well as, where applicable, item 5 below.           </div> </div> |   |
| International application No.<br><b>PCT/AU2004/000295</b>   | International filing date (day/month/year)<br><b>10 March 2004</b>  | (Earliest) Priority Date (day/month/year)<br><b>27 March 2003</b> |
| Applicant<br><b>BIONOMICS LIMITED et al</b>                 |   |   |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II).

3. ☐ Unity of invention is lacking (See Box No. III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☒ none of the figures is to be published with the abstract:

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000295

## A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. <sup>7</sup>: C12Q 1/68, C12N 15/01, A61K 39/395, C07K 14/47

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

SEE ELECTRONIC DATABASES

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SEE ELECTRONIC DATABASES

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WIPS, Medline, CA (see continuation of box B)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No.                |
|-----------|--|--------------------------------------|
| X         | Fujiwara, T. et al. 2003. Mutations of sodium channel $\alpha$ subunit type 1 (SCN1A) in intractable childhood epilepsies with frequent generalised tonic-clonic seizures. Brain, a Journal of Neurology, Vol: 126, pages 531-546. | 1-2, 4, 6-25 and 27-28               |
| X         | Lerche, H. et al. 2001. Ion channels and epilepsy. American Journal of Medical Genetics, Vol: 106, pages 146-159.  | 1-2, 4, 10-13, 17, 21, 25 and 27-28. |
| X         | Cannon, Stephen.C. 2002. Sodium channel gating: no margin for error. Neuron, Vol: 34, pages 853-858.   | 1-2, 4 and 10-11                     |

☒ Further documents are listed in the continuation of Box C☐ See patent family annex

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"E" earlier application or patent but published on or after the international filing date

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"O" document referring to an oral disclosure, use, exhibition or other means

"&amp;" document member of the same patent family

"P" document published prior to the international filing date but later than the priority date claimed

Date of the actual completion of the international search

4 May 2004

Date of mailing of the international search report

14 MAY 2004

Name and mailing address of the ISA/AU

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000295

| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT |   |                          |
|---|---|--------------------------|
| Category*   | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.    |
| X ✓   | Sugawara, T. et al. 2002. Frequent mutations of SCN1A in severe myclonic epilepsy in infancy. Neurology, Vol: 58, pages 1122-1124.  | 1-2, 4, 6-25 and 27-28.  |
| X   | Madia, F. et al. 2003. No evidence of GABRG2 mutations in severe myclonic epilepsy of infancy. Epilepsy Research, Vol 53, pages 196-200.  | 1, 4, 6, 10-15 and 17-25 |
| X   | Malacarne, M. et al. 2002. Lack of SCN1A mutation in familial febrile seizures. Epilepsia, Vol: 43(5), pages 559-562.   | 1-2, 4 and 6-25          |
| X ✓   | Ohmori, I. et al. 2002. Significant correlation of the ScN1A mutations and severe myclonic epilepsy in infancy. Biochemical and Biophysical Research Communications, Vol: 295, pages 17-23.                     | 1-2, 4, 6-25             |
| A   | Spampanato, J. et al. 2003. Generalised epilepsy with febrile seizures plus type 2 mutation W1204R alters voltage-dependent gating of Na <sub>v</sub> 1.1 sodium channels. Neuroscience, Vol: 116, pages 37-48. | 1-2 and 4                |

**Supplemental Box**

(To be used when the space in any of Boxes I to VIII is not sufficient)

**Continuation of Box No: B (Search Terms)**

**Epilepsy, Sodium channel, SCN1A, Severe myclonic epilepsy of infancy, SMEI, mutation, allele, Polymorphism, antibody, anti-sense, ribozyme, RNAi, agonist, antagonist, modulate, inhibit.**